

218
Counsel.

transmitting power to the round of ammunition through a conductive firing pin.

Sub 812
Sub 813

86. (New - Pending). The method of claim 85 and further comprising isolating the voltage supply from the voltage increasing means.

229
Counsel.

87. (New - Pending). The method of claim ⁸⁶85 and further comprising isolating the voltage increasing means from said firing pin. ^a

88. (New - Pending). The method of claim 85 and further comprising electronically detecting the presence of a round of ammunition in said chamber.

89. (New - Pending). The method of claim ⁸⁵88 and further comprising detecting viability of the round of ammunition in said chamber. ¹

90. (New - Pending). The method of claim 85 and further comprising ~~performing an operational sequence to monitor and control the firearm including~~ initiating a sleep mode for the firearm to place the firearm in a nonoperative condition. ¹

REMARKS

Applicants acknowledge with thanks the telephonic interview held between applicant's counsel and Examiner Stephen Johnson on January 13, 2001, to discuss the details of the Official Action, the question of the inapplicability of the recapture rule in this case and the availability of

Request for Continued Examination practice in this reissue application. In order to ensure that the record of this application is accurate and complete, Applicants wish to supplement the record with regard to the Interview Summary mailed on February 15, 2001. In addition to the comments made by Examiner Johnson, Applicants respectfully submit that, during the initial telephone call of the interview, although the issues of recapture and the art rejection were raised, they were not discussed substantially or in detail as the Examiner indicated that no further amendments or arguments in response to the final office action of January 19, 2001, would be considered because it was the Examiner's belief that such amendments potentially would raise additional issues under 35 USC §112, issues that would require further consideration not permitted in an after final response. Applicants further gratefully acknowledge the subsequent telephone call from the Examiner to Applicants' counsel in which the Examiner suggested that Applicants' counsel file a Request for Continued Examination, following which the issues discussed during the previous telephone call could be addressed. Therefore, Applicants have concurrently filed herewith a Request for Continued Examination in accordance with the suggestion of Examiner Johnson, and their responses to the objections and rejections of the claims raised in the Official Action mailed on January 13, 2001 are set forth below.

Original claims 1 - 9 and 11- 40, as amended above, remain pending in the reissue application. Original claim 10 has now been cancelled. New claims 41-43, 45-61, and 64-90 have been added to and are now pending in the present Application for Reissue Patent in accordance with the provisions of 37 C.F.R. § 1.173 and MPEP § 1453. (37 C.F.R. § 1.121(b)(2)(ii)). New claims 44, 62 and 63, which were presented in the response filed on October 26, 2000, have been

cancelled. The pending claims of this application therefore are now original claims 1-9 and 11-40, as now amended, and new claims 41-43, 45-61, and 64-90.

Pursuant to 37 C.F.R. §§ 1.121(b)(1) and 1.173, amendments to the specification have been made as noted above. These amendments to the specification have made to clarify the description of the present invention. No new matter has been added.

Pursuant to 37 C.F.R. 1.173 and MPEP §1411, a cut up copy of the patent as issued, with only a single Column of the patent mounted to a sheet of paper was previously submitted with the Application for Reissue Patent as filed.

Pursuant to 37 CFR 1.178 an Offer to Surrender the Original Patent, executed by the Assignee of Record is attached herewith.

A. Claim Amendments

Pursuant to the provisions of 37 C.F.R. § 1.121(b)(2)(iii), Applicants hereby identify support for the amendments made to original, pending Claims 1, 2, 5, 14, 19 – 21, 25, 30, 38, 39 and 40, and new, pending claims 41-43, 45-61, and 64 - 90 of the reissue application as set forth in the specification of the above-identified patent:

Claim 1 has been amended to remove the discussion in the preamble of the movable bolt assembly, voltage increasing means, means for electronically detecting the presence of a round ammunition within the chamber of the barrel, means for monitoring the capacity of the voltage supply means, and the discussion of the firing pin including forward conductive end and a rearward conductive area. This language was originally present in the claims of the '056 patent as issued, specifically original claim 1, which therefore provides necessary support for this amendment, but

was not required for patentability of the claims over the cited art. Additional support for claim 1 is found in the discussion in the specification given at Column 7, Line 1 - Column 8, Line 57.

Claim 2 has been amended to affirmatively claim a bolt assembly as an additional limitation to further define the invention recited by Claim 1, as now amended. Support for this amendment is found in original claims 1-2 of the '056 patent as issued, and in the specification and drawings, including at Column 7, Lines 1-21 and Column 8, Line 23-44.

Claim 5 has been amended to correct a minor defect raised in the Official Action with regard to the rejection of the claim under 35 U.S.C. Section 112, second paragraph. Claim 5, as now amended, claims a firing pin plunger insulator between the firing pin plunger and the firing pin plug. Support for this claim is found in claim 5 of the '056 patent as issued, as well as being shown in the drawings and discussed in the specification at Column 8, Line 39-Column 9, line 49.

Claim 14, as now amended, claims a means for electronically detecting the presence of a round of ammunition within the chamber of the barrel. Support for this amendment is found in claims 1 and 14 of the '056 patent as issued, and in the specification at Column 7, Lines 54-56, Column 8, Lines 3-15, and Column 11, Lines 32-57.

Claims 19 and 21 have been amended to correct minor defects raised in the Official Action with regard to the rejection of the claims under 35 U.S.C. Section 112, second paragraph, while claim 20 has been amended to correct a minor claim dependency error in Claim 20 as issued. Claims 19, 20 and 21, as now amended, claim an electrical isolation means, with claim 19 claiming a modification of surface of the firing pin, claim 20 claiming the modification as comprising ion implantation, while with regard to claim 21, the electrical isolation means is stated as comprising an insulating coating. Support for these claims, as amended, is found in claims 19, 20 and 21 of the

'056 patent as issued, as well as being shown in the drawings and discussed in the specification at Column 10, Lines 35-59.

Claim 25, as amended, claims a means for isolating the firing pin including an insulative sleeve about the firing pin. Support for this claim is found in claim 25 of the '056 patent as issued and in the specification at Column 10, Lines 35-59.

Claim 30 has been amended to claim the system control means adapted to isolate the firing pin when the safety mechanism is in the safe position by rejecting signals received from a trigger switch when the trigger is activated, and when the trigger is activated while the safety mechanism is switched from the safe position to the fire position. Support for this language is found in original claims 1 and 30 of the '056 patent, as issued, and in the specification at Column 2, Lines 9-13, Column 4, Lines 24 – 45, and Column 5, Lines 16 – 34.

Claim 38 has been amended in similar fashion to claim 1 to delete the discussion of the movable bolt assembly, the step of increasing the voltage from the voltage supply means, electronically detecting the presence of ammunition within the chamber, monitoring the capacity of the voltage supply means, and indicating the status for the firearm. Support for these amendments can be found in original claim 38 of the '056 patent as issued and in the specification of the patent at Column 2, Lines 28-63 and Column 3, Line 54-Column 6, Line 48.

Claim 39 has been amended to further claim the method of claim 38, including detecting the presence of a round of ammunition in the chamber. Support for this claim can be found in original claim 38 of the '056 patent as issued, and in the specification at Column 7, Lines 54-56, Column 8, Lines 3-15 and Column 11, Lines 32-57.

Claim 40, as amended, claims the method of claim 38, including indicating the status of the firearm. Support for this claim is found in original claim 38 of the '056 patent as issued and in the drawings and the specification at Column 2, Line 62, and Column 4, Lines 5 – 23.

New claim 41 claims a means for electronically detecting the presence of a round of ammunition within the chamber of the barrel. Support for this claim is found in claims 1 and 14 of the '056 patent as issued, and in the specification at Column 7, Lines 54-56, Column 8, Lines 3-15 and Column 11, Lines 32-57.

New claim 42 claims the method of claim 38, further including the step of monitoring the capacity of the voltage supply means. Support for this claim is found in claim 38 of the '056 patent as issued and in the specification at Column 3, Lines 28-63, Column 4, Lines 5–10 and Column 5, Line 35 – Column 6, Line 12.

New claim 43 claims the method or process recited by claim 38, with the additional step of preventing voltage from reaching the firing pin when the safety is in a safe position. Support for this claim is found in claim 38 of the '056 patent as issued, and in the specification of the '056 patent at Column 2, Lines 10-14 and 28-63, and Column 4, Lines 46 – Column 5, Line 16.

Previously submitted new claim 44, which claimed the process of claim 38, including preventing the system control from accepting a signal from the trigger assembly generated by an actuation of the trigger assembly when the safety is in a safe position has been deleted and its language added to claim 38. Support for this is found in claim 38 of the '056 patent as issued and in the specification at Column 2, Lines 28-63 and Column 4, Lines 5 – 65.

New claim 45 claims an indicator communicating with the system control means. Support for this claim is found in claim 1 of the '056 patent as issued, in the specification at Column 2, Lines 27-28, Column 4, Lines 10 -23, and Column 7, Lines 27-40, and in the drawings.

New claim 46 claims a firing pin having a forward conducting end for transmitting voltage to a round of ammunition and a rearward conductive area movable into a position to receive the voltage. Support for this claim is found in claim 1 of the '056 patent as issued and in the specification at Column 2, Lines 19-26 and at Column 9, Lines 14-22, Column 10, Lines 9 - 61 and in the drawings.

New claim 47 claims an electronic firearm having a barrel, chamber, firing pin, a voltage supply supplying power to the firing pin for firing a round of ammunition, and a system control for monitoring the firearm and controlling the power supply to the firing pin, and including a means for isolating the firing pin from the voltage supply to prevent firing pin from receiving power from the voltage supply, a trigger for signaling the system control to initiate firing of a round of ammunition, a firearm safety mechanism and an electronic safety operatively connected to the firearm safety mechanism and adapted to isolate the firing pin when the firearm safety is in a safe position by rejecting signals received from the trigger. Support for this claim is found in claim 1 of the '056 patent as issued, as well as in the drawings and in the specification at Column 1, Line 30 – Column 2, Line 27; Column 4, Line 46 – Column 5, Line 16; and Column 7, Line 1 – Column 8, Line 57.

New claim 48 claims a voltage increasing means for increasing voltage received from a voltage supply to a voltage sufficient to initiate the firing of the round of ammunition. Support for this claim is found in claim 1 of the '056 patent as issued in the specification at Column 1, Lines 55-56 and in Column 7, Line 54 – Column 8, Line 2, and in the drawings.

New claim 49 claims the switching means as isolating the voltage supply from the voltage increasing means. Support for this claim is found in claim 1 of the '056 patent as issued and in the specification at Column 1, Lines 58 – 62; Column 4, Lines 46 – 65; and Column 12, Lines 20 – 35.

New claim 50 claims the switching means as isolating the voltage increasing means from the firing pin. Support for this claim is found in claim 1 of the '056 patent as issued and in the specification at Column 1, Lines 58 – 63; Column 4, Lines 45 – 65; and Column 12, Lines 20 – 35.

New claim 51 claims an indicator communicating with the system control means. Support for this claim is found in claim 1 of the '056 patent as issued, in the specification at Column 2, Lines 27-28, Column 4, Lines 10 –23, and Column 7, Lines 27-40, and in the drawings.

New claim 52 claims a system authorization switch for controlling access to the firearm. Support for this claim is found in claims 28 and 29 of the '056 patent as issued, in the specification at Column 3, Line 63 – Column 4, Line 4 and Column 7, Lines 29-30, and in the drawings.

New claim 53 claims an insulating coating about the firing pin of the firearm. Support for this claim is found in claim 21 of the '056 patent as issued, in the drawings and in the specification at Column 10, Line 35-61.

New claim 54 claims an insulative sleeve mounted about the firing pin. Support for this claim is found in claim 25 as issued in the '056 patent, in the drawings and in the specification at Column 10 Lines 35-61.

New claim 55 claims a firearm safety mechanism and an electronic safety operatively connected to the firearm safety mechanism, adapted to isolate the firing pin when the firearm safety

is in a safe position by rejecting signals received from the trigger. Support for this claim is found in claim 1 in the '056 patent as issued, in the specification at Column 1, Line 30 – Column 2, Line 13, and in the drawings.

New claim 56 claims a means for electronically detecting the presence of a round of ammunition within the chamber of the barrel. Support for this claim is found in claims 1 and 14 of the '056 patent as issued, and in the specification at Column 7, Lines 54-56, Column 8, Lines 3-15 and Column 11, Lines 32-57.

New claim 57 claims a firearm safety mechanism movable between a fire and safe position for placing the firearm in a nonoperative condition. Support for this claim is found in the drawings of the '056 patent and in claim 1 of the '056 patent as issued. Additional support is found in the specification at Column 1, Lines 48 – 49.

New claim 58 claims the system control including programming for performing an operational sequence to monitor and control the firearm, including initiating a sleep mode for the firearm. Support for this claim is found in the specification at Column 3, Lines 38-45 and Column 11, Lines 20-30.

New claim 59 claims the system control comprising at least a microprocessor, microcontroller, software, firmware, microcode, digital logic, analog logic, or custom integrated logic. Support for this claim is found in claim 7 of the '056 patent as issued and in the specification at Column 3, Lines 37-41.

New claim 60 claims an electronic firearm having a barrel, chamber, firing pin, a voltage supply supplying power to the firing pin for firing a round of ammunition, and a system control for monitoring the firearm and controlling the power supply to the firing pin, and including a means for

isolating the firing pin from the voltage supply to prevent firing pin from receiving power from the voltage supply, and a trigger for signaling the system control to initiate firing of a round of ammunition. Support for this claim is found in claim 1 of the '056 patent as issued, as well as in the drawings and in the specification at Column 1, Line 35 – Column 2, Line 27 and Column 7, Line 1 – Column 8, Line 57, and in the drawings.

New claims 61 claims a voltage increasing means for increasing voltage received from a voltage supply to a voltage sufficient to initiate the firing of the round of ammunition. Support for this claim is found in claim 1 of the '056 patent as issued in the specification at Column 1, Lines 56-57 and in Column 7, Line 54 – Column 8, Line 2, and in the drawings.

Previously submitted new claims 62 and 63, which claimed the switching means being controlled by the system control to prevent the firing pin from receiving power upon occurrence of at least one of a series of conditions, and a safety movable between a safe and fire position and an electronic safety connected to the safety for monitoring the safety and preventing power from being provided to the firing pin and preventing the system control means from detecting a trigger activation when in a safe position, have been cancelled and their language added to claim 60. Support for this is found in claims 1 and 38 of the '056 patent as issued and in the specification at Column 1, Line 51 – Column 2, Line 63, Column 3, Line 55 – Column 6, Line 67 and Column 11, Lines 8-30.

New claim 64 claims an indicator communicating with the system control. Support for this claim is found in claim 1 of the '056 patent as issued, in the specification at Column 2, Lines 27-28, Column 4, Lines 5 – 65, and Column 7, Lines 27-40, and in the drawings.

New claim 65 claims a firing pin having a forward conducting end for transmitting voltage to a round of ammunition and a rearward conductive area movable into a position to receive the voltage. Support for this claim is found in claim 1 of the '056 patent as issued and in the specification at Column 2, Lines 18-25 and at Column 9, Lines 14-22 and in the drawings.

New claim 66 claims an insulating coating about the firing pin of the firearm. Support for this claim is found in claim 21 of the '056 patent as issued, in the drawings and in the specification at Column 10, Line 35-61.

New claim 67 claims a means for isolating the firing pin of the firearm, including an insulative sleeve mounted about the firing pin. Support for this claim is found in claim 25 as issued in the '056 patent, in the drawings and in the specification at Column 10 Lines 35-61.

New claim 68 claims a means for electronically detecting the presence of a round of ammunition within the chamber of the barrel. Support for this claim is found in claim 1 and 14 of the '056 patent as issued, and in the specification at Column 7, Lines 54-56, Column 8, Lines 3-15 and Column 11, Lines 32-57.

New claim 69 claims a system authorization switch for controlling access to the firearm. Support for this claim is found in claims 28 and 29 of the '056 patent as issued, in the specification at Column 3, Line 63 – Column 4, Line 4 and Column 7, Lines 29-30 and in the drawings.

New claim 70 claims a method of firing a round of ammunition from an electronic firearm, including monitoring a sequence of operative conditions, sending a signal to the system control upon activation of a trigger and controlling and coordinating distribution of power to a firing pin, including isolating and preventing the firing pin from receiving power upon occurrence of any of a series of selected conditions. Support for this claim is found in claim 38 of the '056 patent as

issued, and in the specification at Column 2, Lines 28-63 and Column 3, Lines 55 – Column 6, Lines 67.

New claim 71 claims method of claim 70 and further indicating the status of a firearm. Support for this claim is found in claim 38 in the '056 patent as issued and in the specification at Column 2, Lines 27-28 and 63, Column 4, Lines 5 – 65 and at Column 11, Lines 58 – 65.

New claim 72 claims the method of claim 70, with the step of controlling and coordinating power comprising preventing a voltage increasing means from receiving power from the voltage supply. Support for this claim is found in claim 38 of the '056 patent as issued and in the specification at Column 2, Lines 55-60, and Column 4, Line 55 – Column 5, Line 15.

New claim 73 claims a method of firing a round of ammunition from an electronic firearm, including monitoring a sequence of operative conditions, sending a signal to the system control upon activation of a trigger and controlling and coordinating distribution of power to a firing pin, including isolating and preventing the firing pin from receiving power upon occurrence of any of a series of selected conditions, and further preventing the system control means from accepting a signal from the trigger assembly generated by actuation of the trigger when the safety mechanism of the firearm is in a safe position. Support for this claim is found in claim 38 of the '056 patent as originally issued and in the specification of the '056 patent at Column 2, Lines 32 – 62 and Column 5, Line 17– Column 6, Line 48.

New claim 74 claims the method of claim 73 and further controlling and coordinating distribution of power to the firing pin, including increasing voltage in a voltage increasing mean. Support for the claim is found in claim 38 of the '056 patent as issued and at Column 2, Lines 32-59, and at Column 7, Line 54 – Column 8, Line 2.

New claim 75 claims an electronic firearm having a barrel, chamber, firing pin, a voltage supply supplying power to the firing pin for firing a round of ammunition, and a system control for monitoring the firearm and controlling the power supply to the firing pin, and including a means for isolating the firing pin from the voltage supply to prevent firing pin from receiving power from the voltage supply, a trigger for signaling the system control to initiate firing of a round of ammunition and a means for electronically detecting the presence of a round of ammunition within the chamber of the barrel. Support for this claim is found in claims 1 and 14 of the '056 patent as issued, as well as in the drawings and in the specification at Column 1, Line 35 – Column 2, Line 27 and Column 7, Line 1 – Column 8, Line 57, Column 11, lines 32-57 and in the drawings.

New claim 76 claims an electronic firearm having a barrel, chamber, firing pin, a voltage supply supplying power to the firing pin for firing a round of ammunition, a system control for monitoring the firearm and controlling the firing of the round of ammunition, the system control including a voltage increasing means for increasing the voltage from the voltage supply to a level necessary to initiate firing of a round of ammunition and including a switching means for isolating the firing pin from the voltage supply to prevent firing pin from receiving power from the voltage supply and a trigger for signaling the system control to initiate firing of a round of ammunition. Support for this claim is found in claim 1 of the '056 patent as issued, as well as in the drawings and in the specification at Column 1, Line 35 – Column 2, Line 27 and Column 7, Line 1 – Column 8, Line 57 and in the drawings.

New claim 77 claims the switching means as isolating the voltage supply from the voltage increasing means. Support for this claim is found in claim 1 of the '056 patent as issued and in the specification at Column 1, Lines 58 – 62, and Column 12, Lines 20 – 35.

New claim 78 claims the switching means as isolating the voltage increasing means from the firing pin. Support for this claim is found in claim 1 of the '056 patent as issued and in the specification at Column 1, Lines 58 – 63 and Column 12, Lines 20 – 35.

New claim 79 claims an indicator communicating with the system control means. Support for this claim is found in claim 1 of the '056 patent as issued, in the specification at Column 2, Lines 27-28, Column 4, Lines 10 –65, and Column 7, Lines 27-40, and in the drawings.

New claim 80 claims a system authorization switch for controlling access to the firearm. Support for this claim is found in claims 28 and 29 of the '056 patent as issued, in the specification at Column 3, Line 63 – Column 4, Line 4 and Column 7, Lines 27-39, and in the drawings.

New claim 81 claims a means for electronically detecting the presence of a round of ammunition within the chamber of the barrel. Support for this claim is found in claims 1 and 14 of the '056 patent as issued, and in the specification at Column 1, Lines 63 – 64; Column 2, Lines 5 – 6; Column 7, Lines 54-56, Column 8, Lines 3-15 and Column 11, Lines 32-57.

New claim 82 claims a firearm safety mechanism moveable between a fire and a safe position for placing the firearm in a nonoperative condition. Support for this claim is found in the specification at claim 1 in the '056 patent as issued, in the specification at Column 1, Lines 48-49; Column 2, Lines 10 – 14; Column 4, Lines 24 – 45; Column 5, Lines 17 - 40 and in the drawings.

New claim 83 claims the system control including programming for performing an operational sequence to monitor and control the firearm, including initiating a sleep mode for the firearm. Support for this claim is found in the specification at Column 3, Lines 38-45, Column 5, Line 20 – Column 8, Line 6 and Column 11, Lines 20-30.

New claim 84 claims the system control comprising at least a microprocessor, microcontroller, software, firmware, microcode, digital logic, analog logic, or custom integrated logic. Support for this claim is found in claim 7 of the '056 patent as issued and in the specification at Column 3, Lines 37-41.

New claim 85 claims a method of firing a round of electrically-initiated ammunition from an electronic firearm, comprising receiving a round of ammunition within a chamber, supplying power from a voltage supply for initiating firing of the round of ammunition, increasing the voltage from the voltage supply to a level necessary to initiate firing of the round of ammunition, transmitting power to the round of ammunition through a conductive firing pin, powering a system control by said voltage supply, monitoring the firearm with the system control and controlling the firing of the round of ammunition with the system control, isolating the firing pin from receiving power supplied by the voltage supply and sending a signal to the system control to initiate firing of a round of ammunition as a trigger is activated. Support for this claim is found in claim 38 of the '056 patent as issued, as well as in the drawings and in the specification at Column 1, Line 30 – Column 2, Line 63 and Column 7, Line 1 – Column 8, Line 57 and in the drawings.

New claim 86 claims isolating the voltage supply from the voltage increasing means. Support for this claim is found in claim 38 of the '056 patent as issued and in the specification at Column 1, Lines 58 – 62, and Column 12, Lines 20 – 35.

New claim 87 claims isolating the voltage increasing means from the firing pin. Support for this claim is found in claim 38 of the '056 patent as issued and in the specification at Column 1, Lines 58 – 63 and Column 12, Lines 20 – 35.

New claim 88 claims electronically detecting the presence of a round of ammunition within the chamber of the barrel. Support for this claim is found in claims 1, and 38 of the '056 patent as issued, and in the specification at Column 2, Lines 51 – 52; Column 7, Lines 54-56, Column 8, Lines 3-15 and Column 11, Lines 32-57.

New claim 89 claims detecting the viability of a round of ammunition within the chamber. Support for this claim is found in claims 15 and 39 of the '056 patent as issued and in the specification at Column 6, Lines 12 – 17 and Column 11, Lines 32 – 57.

New claim 90 claims performing an operational sequence to monitor and control the firearm, including initiating a sleep mode for the firearm. Support for this claim is found in the specification at Column 3, Lines 38-45; Column 5, Line 20 – Column 7, Line 6; and Column 11, Lines 20-30.

B. Declaration in Support of Reissue

Also attached with this amendment is a Supplemental Reissue Application Declaration signed by all of the named inventors, in support of the present application for reissue of the above-identified patent (37 C.F.R. §1.172). This Declaration supplements the previously

submitted Declaration of Dale R. Danner filed on October 26, 2000 with the Amendment in Reissue Application. Applicants respectfully request that this Supplemental Reissue Application Declaration be entered in this case.

C. Drawing Objections

The drawings have been objected to under 37 C.F.R. §1.83(a) for various cited informalities. The Examiner has indicated that the proposed drawing corrections filed on October 26, 2000 would correct the cited objections if made as additional drawings. Accordingly, applicant has amended the drawings to include additional drawings. Figs. 1A, 2A, 3A, 4A, 8A, 10A, and 11A, which incorporate the changes proposed in the corrections filed on October 26, 2000, per the suggestion of the Examiner.

Accordingly, it is respectfully submitted that the proposed corrections to the drawings and specification now illustrate more clearly in the drawings the elements recited by the claims so that the objections under 37 C.F.R. §1.83(a) have now been overcome. No new matter has been entered by these proposed corrections.

D. Claim Objections/Rejections

1. Rejections Under 35 USC § 112, Second Paragraph.

Claims 5 and 57 have been rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter of the claimed invention. Claims 5 and 57 have now been amended to correct the cited indefiniteness.

With respect to original claim 5, lines 8-9 have been amended to recite a firing pin plunger insulator "between the firing pin plunger and the firing pin plug". Support for this amendment can be found in Column 8, lines 52-53 of the '056 patent as issued. New claim 57 has been amended as suggested by the Examiner to claim "said safe position". Support is found in claim 1 of the '056 patent as issued. Applicants therefore respectfully submit that claims 5 and 57 are in condition for allowance under 35 USC § 112, second paragraph.

2. Claim Rejections Under 35 USC § 251.

Claims 1-9 and 11-74 have been rejected under 35 USC § 251 on the basis that in the parent case (08/680,490) indicates that highlighted portions of claims 1 and 38 (which were attached to the Official Action) were the reasons that the claim was allowed and that Applicants "surrendered" claiming the invention of a scope that lacks such limitations. MPEP section 1412.02 is cited for the proposition that all reissue claims must retain those limitations. Applicants respectfully submit that this rejection is an improper application of the law regarding reissue applications and maintain the arguments presented in the response filed on October 26, 2000. Reconsideration of this rejection is respectfully requested.

The reissue of patents is provided for under 35 USC § 251, which states:

Whenever any patent is, through error, without any deceptive intention, deemed wholly or partly inoperative or invalid, by reason of a defective specification or drawing, or by reason of the patentee claiming more or less than he had a right to claim in the patent, the director shall, on the surrender of such patent and the payment of the fee required by law, reissue the patent for the invention disclosed in the original patent, and in accordance with a new and amended application, for the unexpired part of the term of the original patent. No new matter shall be introduced into the application for reissue . . .

The position taken by the Office in rejecting claims 1-9 and 11-74 is based upon the "recapture rule" by which subject matter that is intentionally surrendered during prosecution in order to obtain an allowance, cannot be construed as an error for reissue such that "the recapture rule, therefore, prevents a patentee from regaining through reissue subject matter that he surrendered in an effort to obtain allowance of the original claims." Ball Corp v. United States, 729 F2d 1429 (Fed. Cir. 1984); In re Clement 131 F3d 1464, 1468 (Fed. Cir. 1997).

Specifically, the Examiner appears to rely on MPEP §1412.02, Example (c) to state that "applicant(s) has "surrendered" claiming his invention of a scope which lacks the "reasons-it-was-allowed" limitation based on a failure of applicants' prior counsel to comment or respond to the Examiner's reasons for allowance in the original prosecution." Applicants' respectfully submit that the attempted application this "Example (c)" in this case is not proper and is in direct conflict with the explicit directions of the U.S. Court of Appeals for the Federal Circuit for determining whether the "recapture rule" applies and the rules governing patent practice under 37 CFR § 1.104.

As recognized by the Federal Circuit in In re Clement, application of the recapture rule to reissue claims is viewed under a two step test:

1. Determine whether and in what "aspect" the reissue claims are broader than the patent claims; and
2. Determine whether the broader aspects of the reissue claims relate to surrendered subject matter.

In re Clement, 131 F3d at 1468-69.

In order to decide whether the recapture rule should apply, therefore, a determination first must be made as to whether the applicant "surrendered the subject matter of the cancelled or amended claim." See id. To make this determination of whether an applicant surrendered particular subject matter, the Federal Circuit has expressly directed that the focus be on the prosecution history "for arguments and changes to the claims made to overcome a prior art rejection." In re, Clement, 121 F2d at 1468 – 69; citing Mentor Corp. v. Coloplast, Inc., 998 F2d 992 (Fed Cir. 1993) (emphasis added). This language clearly indicates that there must therefore have been some action or "effort to obtain allowance" of the claims by the patentee(s) during prosecution in response to a prior art rejection to have caused or raised a surrender of subject matter claimed in the original application. Further, as explicitly recognized by the Federal Circuit, even in cases where amendments have been made, "the recapture rule does not apply where there is no evidence that [Seattle Box's] amendment of the [its] originally filed claims was in any sense an admission that the scope of that claim was not in fact patentable." Mentor, 998 F2d at 995, citing Seattle Box Company, Inc. v. Industrial Crating & Packing, Inc., 731 F2d 818 (Fed Cir. 1984) (emphasis added).

Indeed, under the discussion in MPEP § 1412.02 of "CRITERIA FOR DETERMINING THAT SUBJECT MATTER HAS BEEN SURRENDERED:" it is stated:

If the limitation now being omitted or broadened in the present reissue was originally presented/argued/stated in the original application **to make the claims allowable over a rejection or objection made in the original application**, the omitted limitation relates to subject matter previously surrendered by applicant, and impermissible recapture exists...

The Examiner should review the prosecution history of the original application file (of the patent to be reissued) for recapture. **The prosecution history includes the rejections and applicants arguments made therein.** The record of

the original application must show that the broadening aspect (the omitted/broadened limitation(s)) relates to subject matter that the applicant previously surrendered.

Thus, even MPEP § 1412.02 in describing the criteria that must be present in order to find recapture, recognizes there must have been some affirmative action by the patentee, i.e., a response "to make the claims allowable over a rejection or objection" so as to create some prosecution history that would indicate that the applicant intentionally surrendered the subject matter being sought to be broadened so as to raise the application of recapture. That is clearly not the case here.

In the present case, there was no action by the patentee or its attorney, i.e., no amendments made or claims cancelled, by which it should be considered to have surrendered or given up subject matter now being claimed. In fact, there is basically no prosecution history here as the claims issued following a first action allowance. Consequently, as discussed with Examiner Jordan, since there is no prosecution history, and thus, there were no amendments or any changes made to the claims to delete or cancel any subject matter now sought in the present application for reissue, there can be no surrender of subject matter and therefore the recapture rule cannot and does not apply.

Under the prior rules regarding reissues, one of the recited reasons or bases to support a reissue application was that the applicant and/or his attorney failed to appreciate the scope of the invention. This clearly is the case in the present application where the claims were filed with unnecessary limitations such that less was claimed than the applicants had a right to claim and then were allowed without any further comment or action by applicants. It was not until some time after the issuance of the claims of the patent that it came to the attention of the assignee of

record that the claims as filed were narrower than the patentee had a right to claim. Thus, the applicants should not be held to have surrendered subject matter simply because their application was filed with unnecessarily limited claims and neither they or the Office did anything to affirmatively limit or surrender specific subject matter of the claims. To do so would seemingly bar the reissue of any application, which is not the purpose of the recapture rule, and would conflict with the explicit direction of the Federal Circuit as to when recapture should be found and applied. (See In re Clement, 131 F3d 1468 – 69). Under such circumstances, it is the prevailing law that must control, not an example in the MPEP. See Ethicon Inc. v. Quigg, 849 F2d 1422 (Fed Cir. 1988).

In addition, the reading Example (c) of MPEP § 1412.02 is in direct conflict with the regulations regarding the nature of examination of patent applications, specifically 37 CFR § 1.104(e) that addresses the Examiner's statement of reasons for allowance. Specifically, 37 CFR § 1.104(e) provides:

(e) Reasons for Allowance. If the Examiner believes that the record of the prosecution as a whole does not make clear his or her reasons for allowing a claim or claims, the Examiner may set forth such reasons. The reasons shall be incorporated into an Office Action rejecting other claims of the application under reexamination or may be the subject of a separate communication to the applicant or patent owner. The applicant or patent owner may file a statement commenting on the reasons for allowance within such time as may be specified by the Examiner. **Failure to file such a statement does not give rise to any implication that the applicant or patent owner agrees with or acquiescence in the reasoning of the Examiner.**

By this language therefore, the rules pertaining to the prosecution of patents, the primary function of which is "to advise the public of the rules which have been established in accordance with the statutes and which must be followed before the Office", clearly state that not responding

to reasons for allowance should not and does not give rise to any implication of an agreement or acquiescence of the reasoning of the Examiner such that the failure to respond to such statements should be considered as a surrender or acquiescence that would give rise to the recapture rule.

Further, in MPEP § 1302.14, it is stated that while the Examiner is not required to present such reasons for allowance, it is strongly urged that the Examiner make such statements to see that the file history is as complete as reasonably possible. Thus, in the vast majority of cases, there will be and typically is a statement by the Examiner of his reasons for allowance of the application. Taking the broad view of Example (c) that is being urged by the Examiner in the current reissue examination, in view of the fact that the original patent issued on a first action allowance with no prosecution history in which the applicant amended or argued a particular feature or features of the claims for patentability, the MPEP therefore would effectively block or prevent the use of the reissue procedure and/or practice in all issued patents in which reasons for allowance were given and not completely disputed/claimed. This was clearly not the intent of congress in enacting and providing for the reissue procedure under the patent laws and is clearly not what is contemplated by the guidelines for the application of recapture and reissue cases as set forth by the controlling case law from the U.S. Court of Appeals for the Federal Circuit. (see, In re Clement, 131 F3d at 1468 – 69) and thus cannot stand.

Reading Example (c) in view of the Federal Circuit guidelines of In re Clement, which direct the Examiner to focus on the patentee's actions, including amendments and/or arguments made by the patentee during prosecution in order to find recapture, this Example (c) could be proper and therefore not in conflict with the rules governing patent practice and the settled case law controlling where such reasons for allowance came in response to amendments or arguments

made during prosecution by the Applicant in order to argue or place the claims in condition for allowance, which arguments or amendments were then recognized by the Examiner as being what made the claim allowable over the prior art rejection or objection and to which the Applicant then did not respond, thus creating a recapture situation. This is not the case in the present application as discussed with Examiner Jordan during the October 3, 2000 personal interview in which there was no prosecution history regarding these claims since they were allowed on a first action allowance without prosecution.

It is respectfully submitted, therefore, that, as discussed with Examiner Jordan, the applicants should not be unduly restricted by the unwarranted application of the recapture doctrine where there is no prosecution history and no actions were taken by the applicants or their attorney to affirmatively give up or surrender subject matter that is now sought to be covered by the claims simply because the scope of the invention was not recognized at the time of filing of the application. As discussed, such rejection has no basis in and is in fact contrary to the controlling law governing reissues and allowances of patents in view of the facts of this case. Accordingly, the rejection of claims 19, 41-43 and 45-74 under 35 USC § 251 should be withdrawn.

4. Claim Rejections Under 35 USC § 102

Claims 1, 7 – 9, 11 – 13, 21, 25, 28, 32, 35, 38, 40, 42 – 43, 45 – 54, 57, 59 – 67, and 69 – 74 have been rejected under 35 USC § 102(b) as being anticipated by Harthcock. Applicants respectfully request reconsideration.

The Harthcock patent is directed to a personal weapon system comprising a microprocessor controlled "blow forward" handgun. This system appears to be primarily directed to the compilation and recording of information for display on an LCD display screen and for recording information which is time, date, number of rounds fired, and other information for crime lab analysis, and for programming a desired trigger pressure. Harthcock does include a series of sensors or switches, including a sensor for sensing the breech position of a firearm, i.e., open or closed, which breech sensor is used as a means of determining if the gun is physically able to fire, trigger safety switch 83 mounted on the trigger that connects the trigger to the processor 31 when closed, and front and rear grip safety switches 51 and 52, which apparently are not linked or otherwise in communication with the processor 31 (see Fig. 3).

In contrast to the claimed invention, however, Harthcock does not appear to disclose a system control that actively monitors the firearm upon receiving a trigger signal to monitor a series of pre-programmed conditions or parameters of the firearm and which thereafter isolates and prevents the electrically conductive firing pin from receiving a firing pulse upon the detection or failure of any one of a series of preprogrammed conditions or parameters. In fact, it appears that if a user squeezes the trigger of Harthcock with a sufficient minimal pressure, as is required for the normal operation of most mechanically operated firearms, the Harthcock control processor will send power to the round to fire the weapon without actively monitoring the state of the firearm. Thereafter, the only condition that apparently will stop the transmission of power to the round of ammunition is an improper gripping of the grip safety switches, which is not a condition monitored by control processor 31 and which seemingly will not occur absent the firearm being dropped or the user affirmatively trying to mishandle the firearm by not holding it

by the grip. Thus, it does not appear that the microprocessor or control processor 31 of Harthcock performs diagnostic type, active monitoring of programmed conditions or states of the firearm and control functions as in the claimed invention. Instead, it appears that the control processor 31 of Harthcock is designed to provide memory and feedback of the firing of the weapon, such as by updating a rounds remaining indicator 78 on display 47 (see Column 7, Lines 39-62) and storing firing parameters (see Column 5, Lines 43-59).

Harthcock further appears to operate simply as a function of the closing of a series of switches, including breach open sensor 38 that is closed when the breach is closed, grip safety switches 51 and 52 that are closed simply by gripping the firearm grip, and the trigger safety switch 83 that apparently is closed when the user touches and begins to squeeze the trigger. Thus, once the firearm is gripped and the user puts his finger on the trigger, the weapon will fire as sufficient pressure must be applied to trigger 82 and sensor 84 to cause bar graph 76 to reach a trigger detonation mark 75 to activate the AC power generator 49. (Column 6, Line 40-Column 7, Line 10). In fact, it appears that once the breach is closed and the trigger engaged, the processor 31 simply functions to record data, not to monitor and control a firing operation of the firearm.

The Examiner has asserted that not permitting a firing pulse to be generated (as in Harthcock) is effectively the same as isolating the firing pin from the voltage source (as in the present invention). Applicants respectfully disagree. Isolating the firing pin from the voltage source, as is claimed in the present invention, allows for a firing pulse to be generated and stored upon activation of the trigger, such that the firearm is ready to fire if certain pre-programmed conditions do not exist. If one of the preprogrammed conditions does exist, the firing pulse is

can be blocked from the firing pin and the round of ammunition. On the other hand, in the Harthcock firearm once the breach is closed and the user grips the firearm, closing grip switches 51 and 52, and then pulls the trigger, thus closing switch 83, a firing pulse is generated to cause the firearm will fire a round of ammunition. Thus, once, generated, the firing pulse apparently cannot be blocked or otherwise prevented from being transmitted to the round of ammunition by the control processor 31 of Harthcock upon the subsequent occurrence of any preprogrammed conditions. Therefore, the present invention allows for much greater active monitoring and control of firearm operation than Harthcock does or apparently contemplates.

Harthcock therefore fails to teach an electronic firearm having a system control that actively monitors, controls, and coordinates distribution of power to the firing pin, which includes isolating and preventing power from the voltage supply from reaching the firing pin upon the detection of any preprogrammed condition, parameter, or state that is either necessary or which evidences a fault or nonoperative condition requiring a firing operation to be stopped from firing the firearm.

It is accordingly respectfully submitted that Harthcock fails to teach the construction for an electronic firearm and method of firing a round of ammunition from an electronic firearm as recited in amended, pending claims 1, 7 – 9, 11- 13, 21, 25, 28, 32, 35, 38, 40, 42 – 43, 45 – 54, 57, 59 – 61, 64-67, and 69 – 74. Therefore, it is respectfully requested that the rejection of these claims under 35 USC § 102(b) as being anticipated by Harthcock be withdrawn. Applicants further submit that, for the reasons set forth above, Harthcock does not teach the construction and methods claimed in newly submitted claims 75-90.

In addition, claims 1, 38 and 47 have been amended, include the limitations directed to the switching means for isolating the firing pin, safety mechanism and an electronic safety as disclosed in claims 44 and 55, which were previously indicated to be allowable over Harthcock. Claims 1-9, 11-54 and 5 are therefore further believed to be allowable over Harthcock.

5. Claims not Rejected Based on Prior Art

Pending claims 2-6, 14-20, 22-24, 26, 27, 29-31, 33, 34, 36, 37, 39, 41, 44, 56 and 58 have not been rejected based on prior art. However, the Examiner has not indicated that these claims contain allowable subject matter. Applicants respectfully submit that the limitations in these claims are not taught by Harthcock and that the claims are allowable over the prior art.

E. Conclusion

Applicants respectfully submit that the claims now pending in the present Application for Reissue Patent, including pending original claims 1-9 and 11-40, as now amended, and pending new claims 41-43, 45-61 and 64-90, are presently allowable. Applicants therefore respectfully request an early allowance of these claims.

Should the examiner have any questions or comments regarding the Application for Reissue Patent or the preliminary amendments made herein and above, the examiner is invited and requested to contact the undersigned attorney at the address and telephone number listed below.

Respectfully submitted,

D. Scott Sudderth
D. Scott Sudderth
Registration No.: 34,026

WOMBLE CARLYLE SANDRIDGE & RICE
P.O. Box 7037
Atlanta, Georgia 30357-0037
(404) 782-7000
(770) 870-8173 (fax)

Certificate of Express Mailing

I hereby certify that this document is being
deposited as Express Mail in an envelope addressed to
Assistant Commissioner for Patents, Washington D.C.,
20231-0001 on May 14 2001, Express Mail No.

Jim O'G